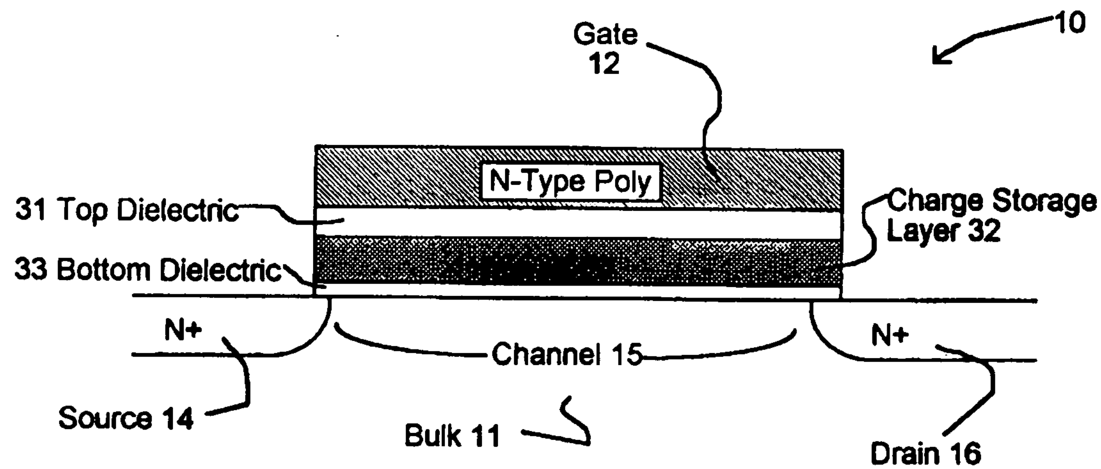
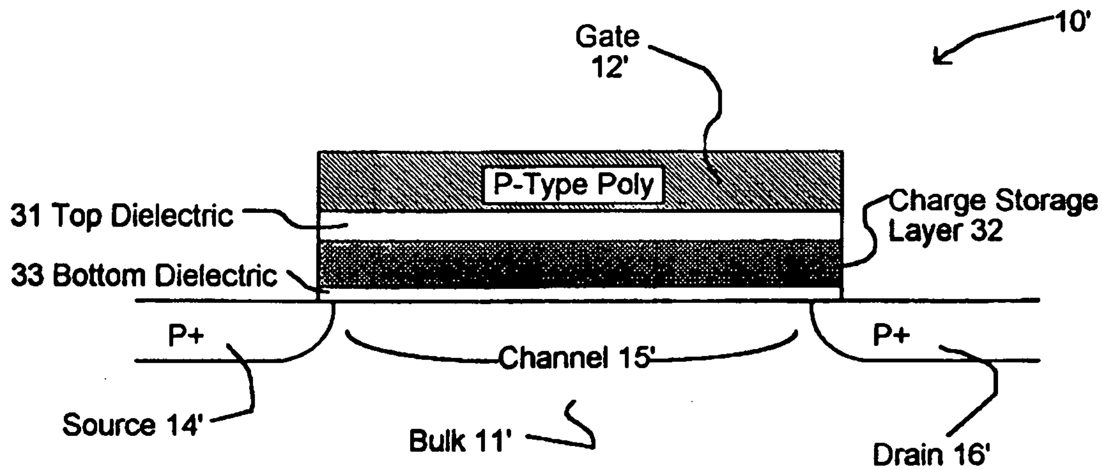
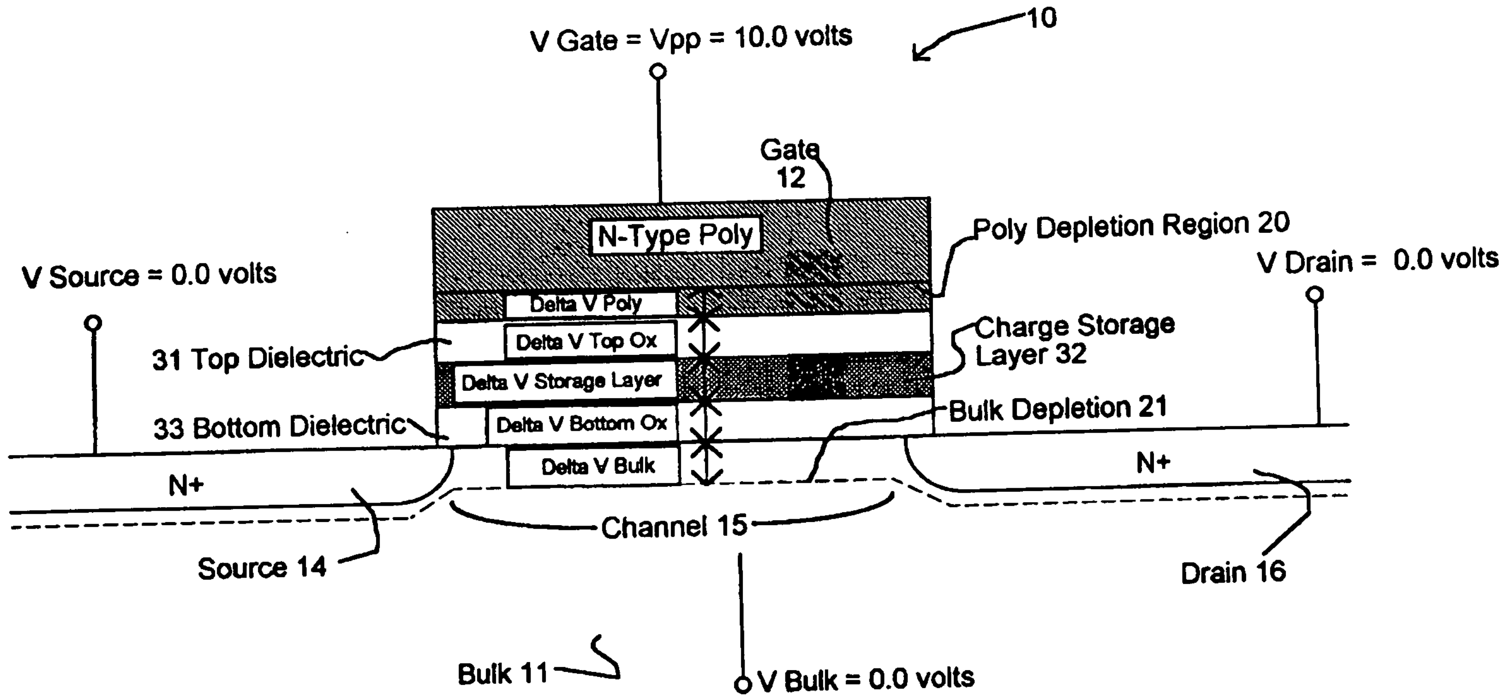


PRIOR ART
FIG. 1



PRIOR ART
FIG. 2



Delta_V_Poly + Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = Vpp

Ideally Delta_V_Poly << Vpp

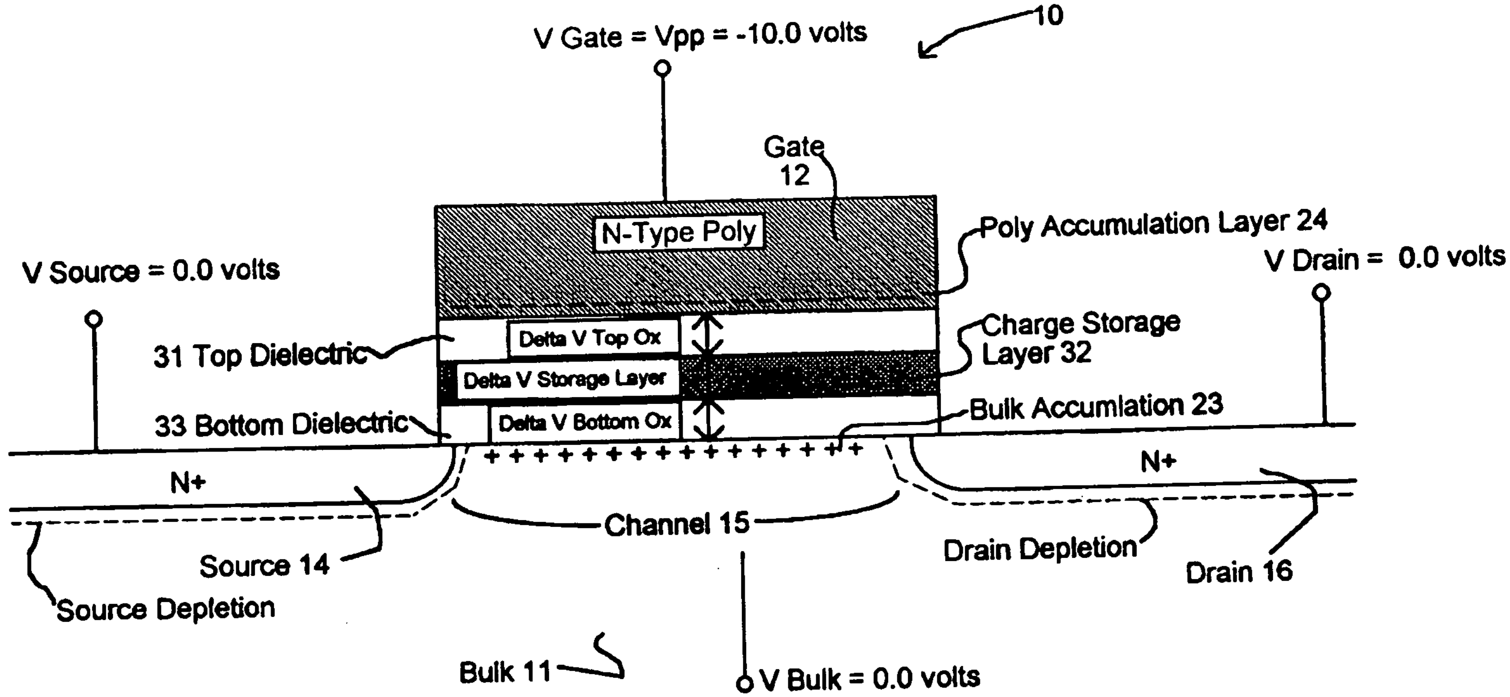
When Delta_V_Poly is a small fraction of Vpp, e.g. 0.5 volts out of 10.0 volts, this leaving a healthy

Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = 9.5 volts

PRIOR ART

FIG. 3

09689442 . 101200



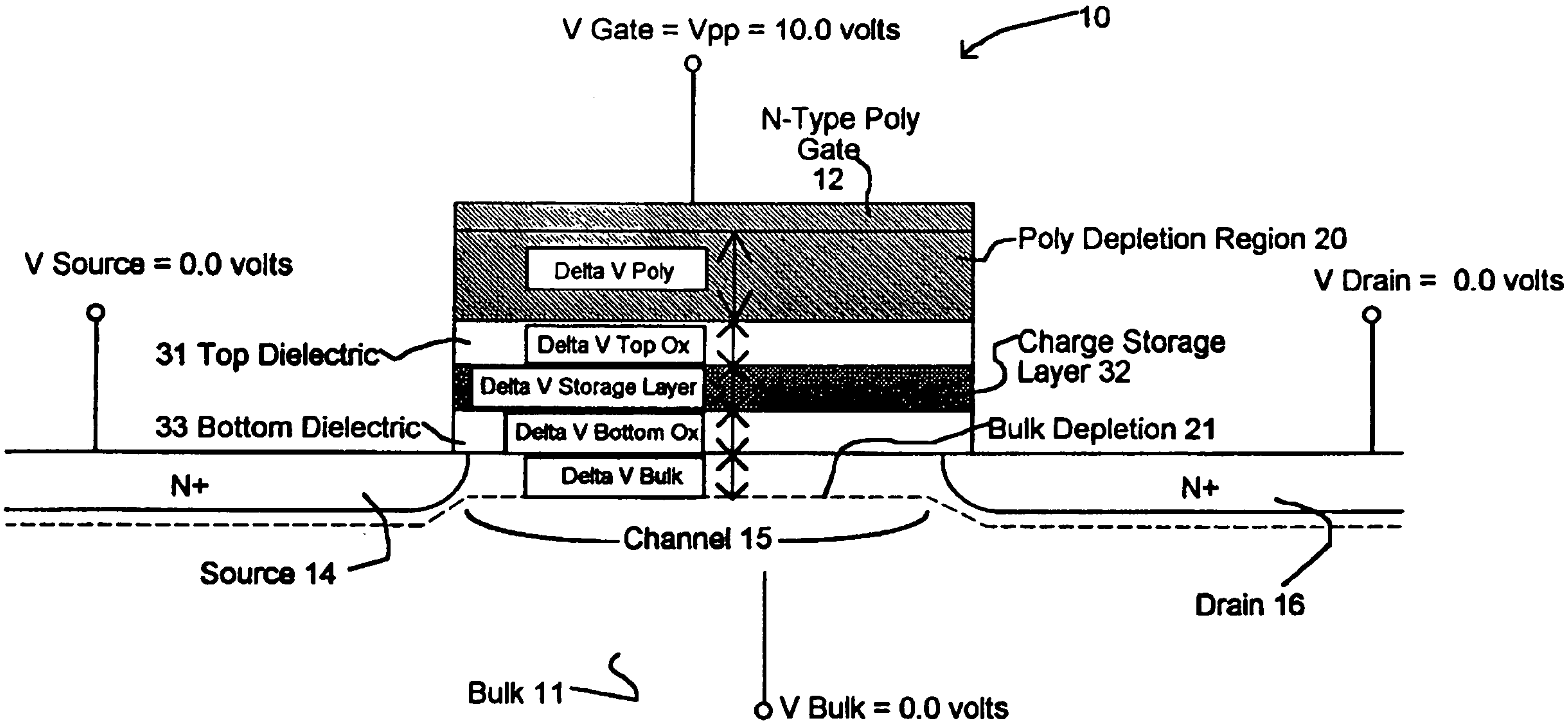
The Poly and Bulk Depletions are converted to Accumulation layers, so

this is an ideal situation where all of the applied voltage, Vpp, drops across the gate dielectric.

Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox = Vpp.

PRIOR ART

FIG. 4



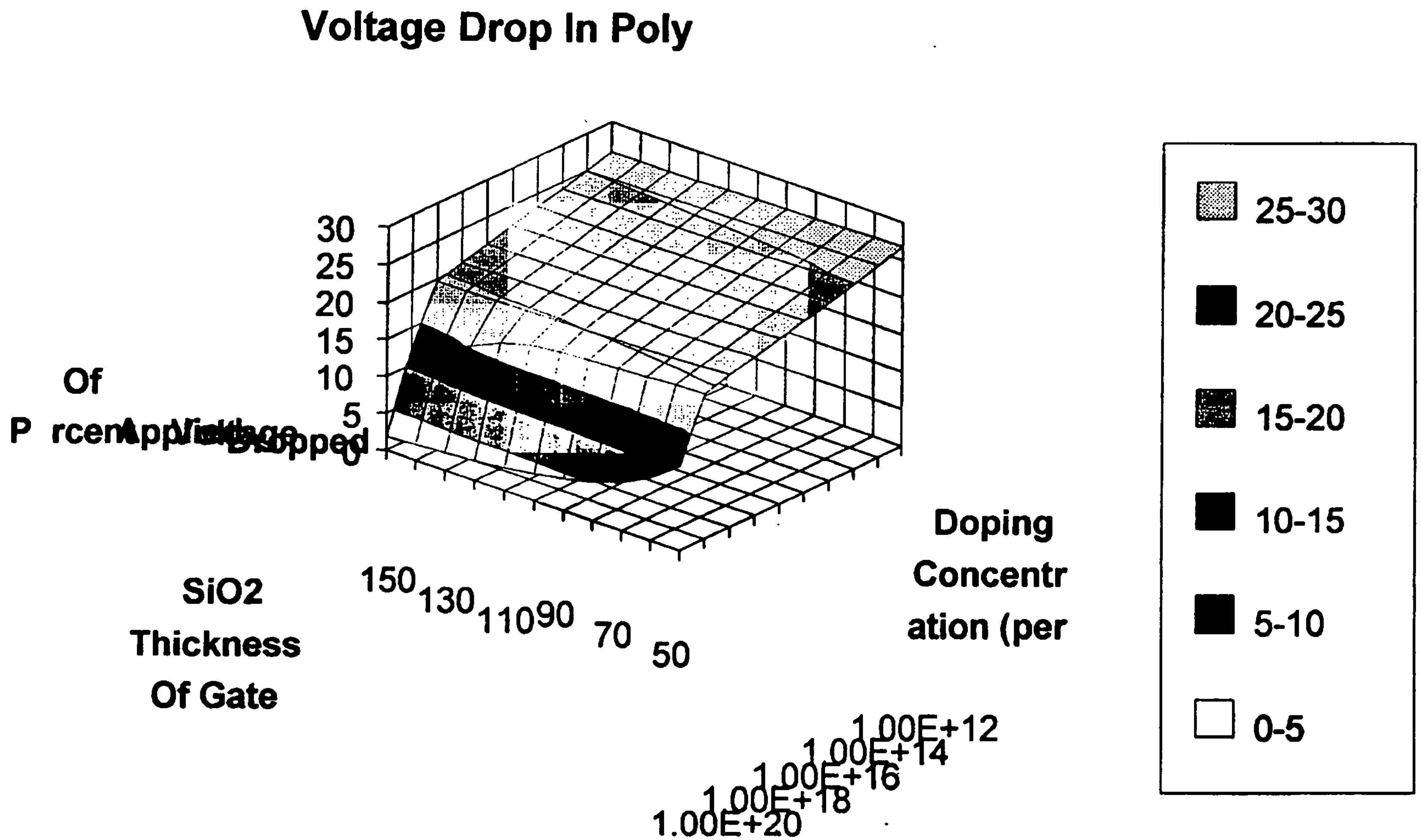
Delta_V_Poly + Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = Vpp

Delta_V_Poly is a large fraction of Vpp, e.g. 3.0 volts out of 10.0 volts, leaving only

Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = 7.0 volts

PRIOR ART

FIG. 5



PRIOR ART

FIG. 6

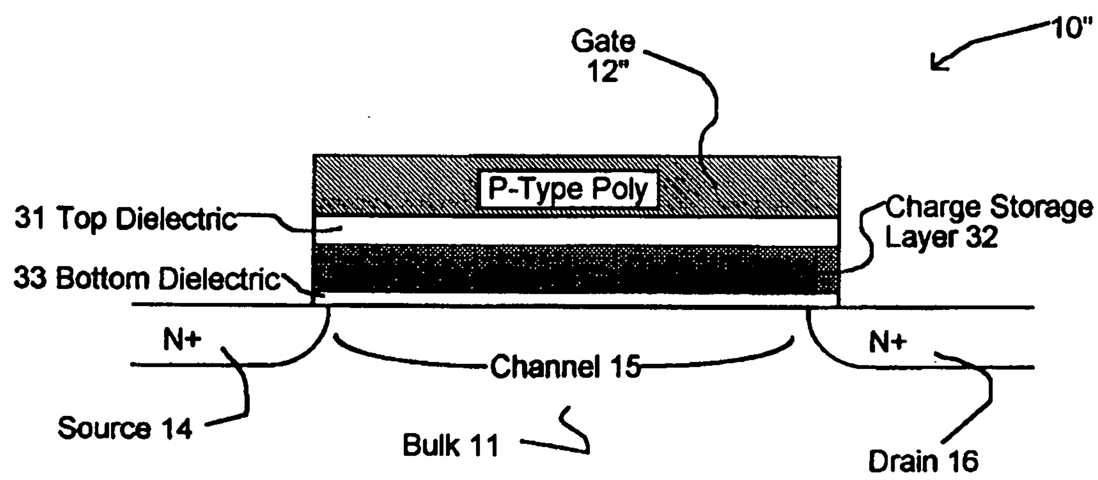

10"
Gate
12"
P-Type Poly
31 Top Dielectric
Charge Storage
Layer 32
33 Bottom Dielectric
N+
N+
Channel 15
Source 14
Bulk 11
Drain 16

FIG. 7

09689442.101200

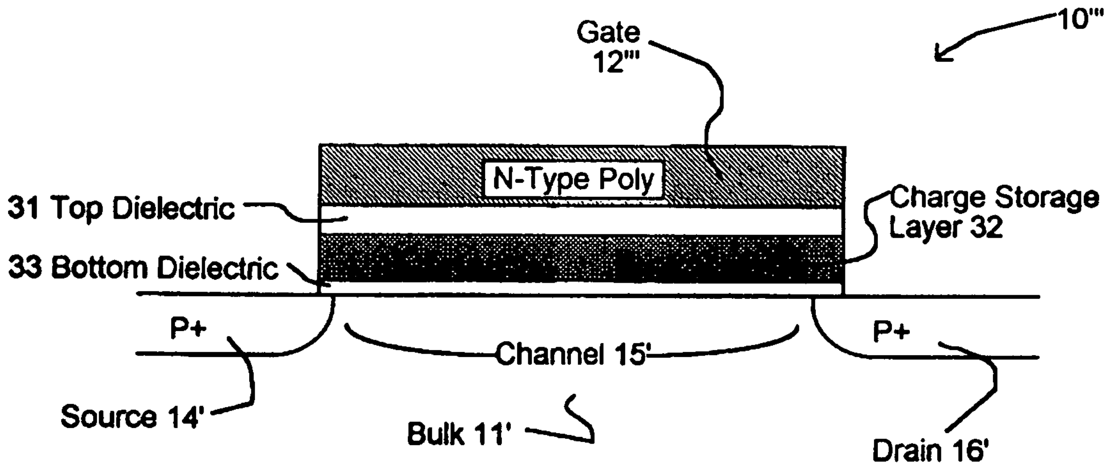
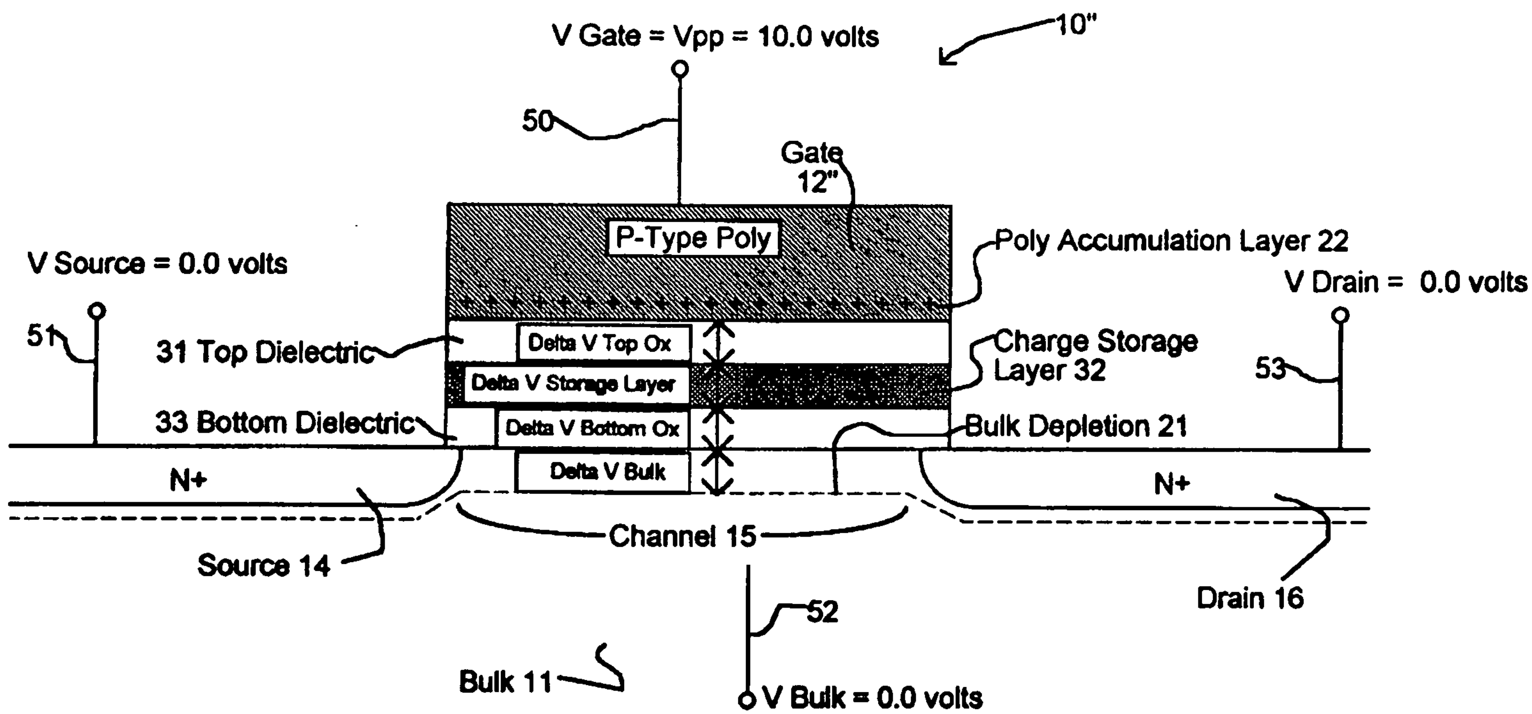


FIG. 8



Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = Vpp

FIG. 9

09689442.101200

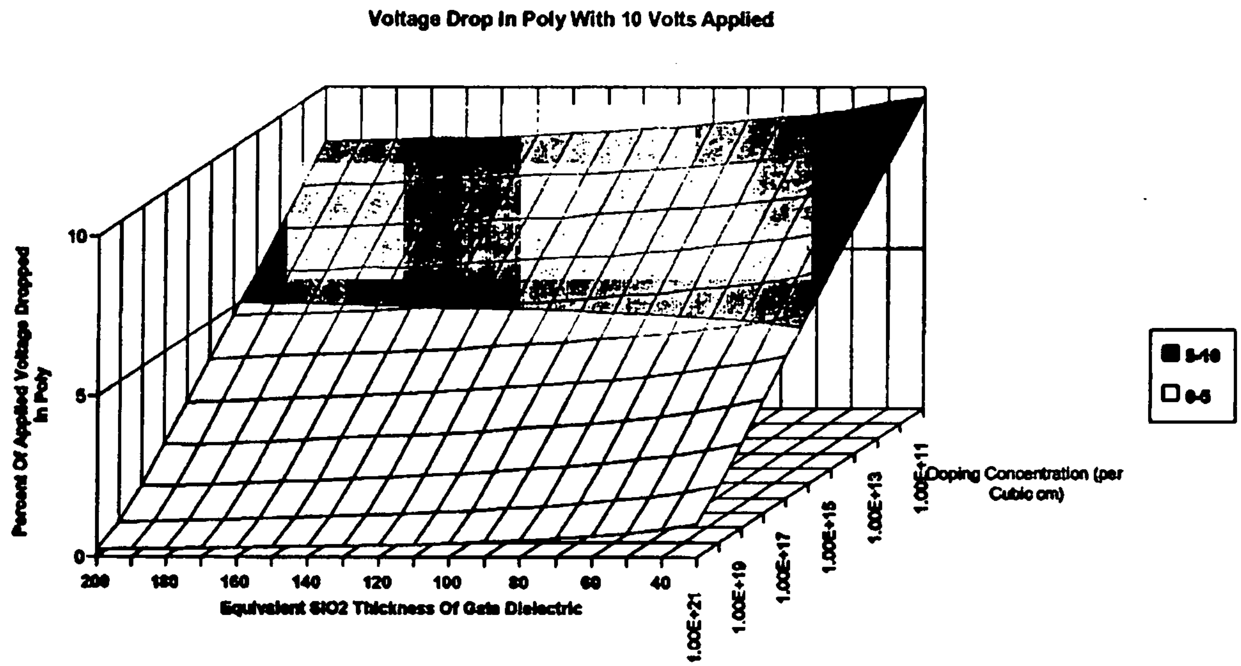
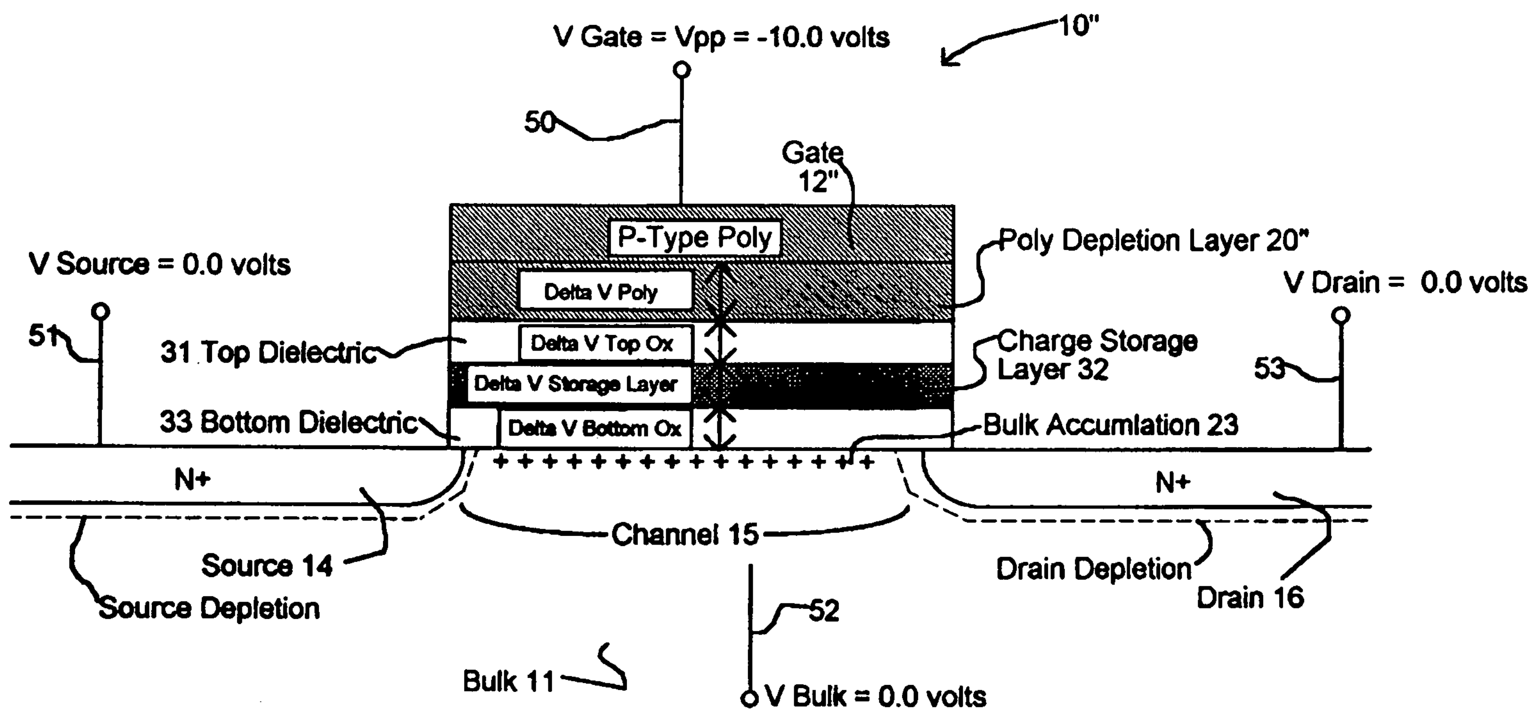


FIG. 10

002T0T"2hh68960



Even though a Poly Depletion exists, the Bulk Depletion Is converted to a Bulk Accumulation, so

Delta_V_Poly + Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox = Vpp.

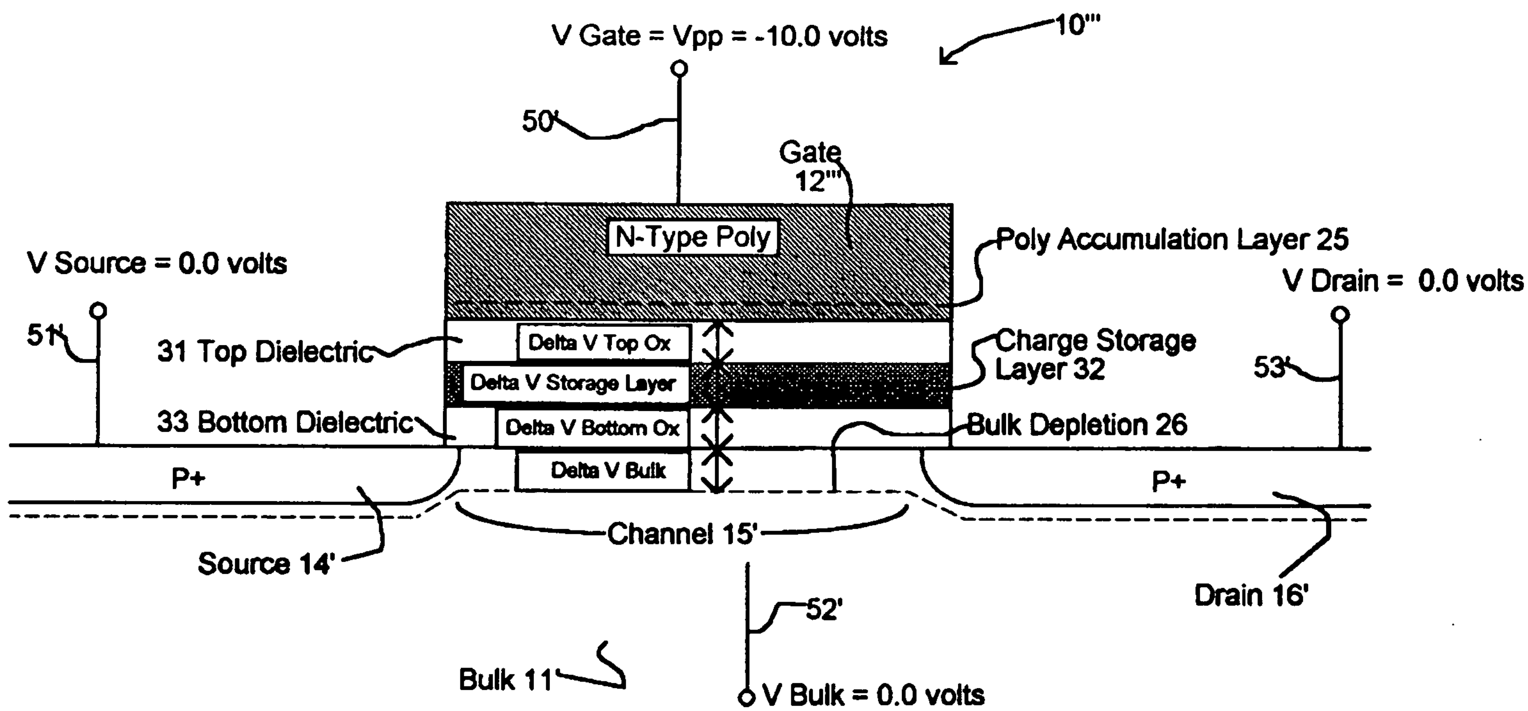
Ideally Delta_V_Poly << Vpp.

When Delta_V_Poly is a small fraction of Vpp, e.g. 0.5 volts out of 10.0 volts, this leaving a healthy

Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox = 9.5 volts.

FIG. 11

00210T" 24468960



Delta_V_Top_Ox + Delta_V_Storage_Layer + Delta_V_Bottom_Ox + Delta_V_Bulk = Vpp

FIG. 12